The Early Years of Coeducation at the Yale University School of Medicine

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Yale College, 1980

Received November 14, 1979

The Yale School of Medicine began accepting women as candidates for the degree of medicine in the fall of 1916. This decision was consistent with the trend in medical education at the time. While Yale was not the first prestigious Eastern medical school to admit women, joining Johns Hopkins (1893) and the University of Pennsylvania (1914), it was not one of the last. Columbia University College of Physicians and Surgeons admitted women a year later, but Harvard Medical School held out until 1945. The years 1916-1920 saw the number of women enrolled in medical school almost double. Yale's decision to admit women seems to have been made with little resistance from the faculty. The final decision was made through the encouragement and financial help of Henry Farnam, a professor of economics at Yale, who agreed to pay for the women's bathrooms. His daughter, Louise, was in the first class of women. At graduation she was awarded the highest scholastic honors, the Campbell Gold Prize. From Yale she travelled to the Yale-sponsored medical school in Changsha, China, where she became the first female faculty member, a position she held for twelve years. The impressions of Ella Clay Wakeman Calhoun, the only woman to graduate in the second class of women, are presented here. Since 1916 the Yale School of Medicine has undergone extensive physical and philosophical changes, developments in which women have participated.

INTRODUCTION

On June 16, 1916, the Yale Corporation voted to accept women to the School of Medicine [1]. In the year preceding the admission of women to the Yale School of Medicine, the Board of Permanent Officers, the governing body of the medical school, discussed the admission of women three times. Short, terse reports were made by the secretary. The first time, a committee of three was appointed to confer with the Prudential Committee of the Yale Corporation on the matter [2]. The second time they voted to accept female students, provided the necessary expenses for alterations could be met [3]. On May 26, 1916, the Committee on the Admission of Women reported that the necessary changes could be made for less than one thousand dollars [4]. In the two months that passed between the last two discussions, Henry Farnam had agreed to pay for the women's bathrooms, which apparently had been a limiting factor. In only three months of debate the Yale University School of Medicine had become coeducational.

SOCIAL TRENDS LEADING TO THE ADMISSION OF WOMEN

Throughout history women traditionally have been accepted only into the supporting roles of health care delivery. Men, as university-trained physicians, held the positions of power and authority. That they had a greater knowledge than the lay-healer in the treatment of disease is now recognized by some historians to be a belief propagated by their authority, but not necessarily the whole truth [5]. An informal

network of midwives and nurses treated ailments with home-made remedies for thousands of years [6]. In the Middle Ages, many of these women were accused of witchcraft, probably in part because they were competing with the authorities who had the power to have them burned [7]. In the United States in the nineteenth century, women were more readily accepted into the Homeopathic and Eclectic medical schools, whose second-rate standing was consistent with the expected role of woman as nurturer, not healer. These medical schools closed during the conversion to a more scientific curriculum in the 1890s and early 1900s. Access to the medical profession became difficult, if not impossible, for even the most determined woman, A startling statistic is that in Boston in 1890, 18 percent of the doctors were women [8]. Even in 1976, during a growth in the number of women seeking a medical degree. only 8.6 percent of the doctors in America were women [9]. The professionalization of medicine, the move of medical education to systematic instruction along scientific lines, excluded women, since, lacking opportunities to obtain a college degree, few women could meet the necessary chemistry and biology requirements for admission. If they did, they were told that their place was not in the hospital, but at home [10].

The decision to admit women to Yale University School of Medicine in 1916 was consistent with the trend in medical education at that time. In the first decade of the twentieth century, regular medical schools which accepted women were admitting fewer of them than they had in the 1890s, and some even closed their doors to women entirely [11]. Tufts Medical School is a classic example: in 1900 42 percent of its graduates were women, by 1908 this figure was 9.4 percent [12]. Northwestern University closed its doors to women abruptly in 1902 and did not admit them again until 1926 [13]. From 1910 to 1916, the enrollment of women at coeducational medical colleges dropped from 752 to 464 [14]. (Refer to Table 1.) Concurrently, the number of women in women's medical colleges also fell. Many medical schools were closing because of the recommendations of the famous Flexner report which was published in 1910 [15]. There were 31 fewer coeducational medical schools in 1916 than in 1910, and only one women's medical college. The percentage of women enrolled, however, was a constant 3.5 percent [16].

The year 1916 was the turning point for women in pursuit of a medical degree. From 1916 to 1920, the number of women enrolled in medical schools rose from 464 to 727 [17]. (Refer to Table 1.) Even more significant was the growing proportion of women to men attending medical school; the percentage of women to total enrollment rose to 5.8 percent [18]. The number of coeducational medical schools increased by 13 during these four years, but because Homeopathic and Eclectic schools continued to close, the total number of medical schools decreased to 85 [19].

Yale began to admit women at roughly the same time as other prestigious Eastern institutions [20]. The medical school of the University of Pennsylvania admitted women in 1914; Columbia followed Yale in 1917 [21]. Harvard did not admit women until 1945, ninety-eight years after the proposition was first introduced [22]. Johns Hopkins was one of the first medical schools on the East Coast to admit women. In

TABLE 1
Women Enrolled in Medical Schools from 1910 to 1920^a

	1910	1912	1914	1916	1918	1920
Women's medical colleges	155	143	235	102	70	89
Coeducational	752	536	496	464	511	727
Total	907	679	631	563	581	818

^aJAMA 77: 531, 1921

1889 Mary Elizabeth Garrett agreed to finance the completion of the medical school at Johns Hopkins, provided women were admitted [23].

In 1910 Abraham Flexner published the results of a two-year nationwide survey of medical colleges financed by the Carnegie Foundation. His conclusions, which condemned most schools as grossly inadequate, were responsible for upgrading the quality of medical education by (1) forcing inadequate medical schools to close, and (2) forcing the remaining medical schools to raise their standards of admission and concentrate on teaching and research [24]. The impact of the Flexner report was so great that in ten years forty-six of the one hundred and thirty-one medical schools were closed [25]. Abraham Flexner used the curriculum at Johns Hopkins as the model for medical education by which he evaluated other medical schools in the United States and Canada. Vernon Lippard, a former Dean of the Yale School of Medicine, writes: "...[Johns Hopkins] introduced methods of instruction and faculty organization that were to be followed by most of the surviving schools over the next thirty years" [26]. As women's career goals were changing to include the professional, medical school curriculum and requirements were also changing.

Flexner had stressed these requirements for a medical education:

- 1. Preparation for medical school should include two years of biology, chemistry, and physics.
- 2. The basic sciences should be taught by an experienced, full-time faculty.
- 3. Students should have contact with patients in a hospital setting.
- 4. Medical schools should be affiliated with universities.
- 5. Endowment, not support from student fees, should be the source of income [27],

Some of these innovations, such as the biology, chemistry, and physics requirement, had been made at Yale by 1916 [28] while the hiring of full-time faculty in all departments and the joining of the Yale School of Medicine to the New Haven Hospital would occur later. Such changes are indicative of the influence of the Johns Hopkins model and of Flexner's recommendations.

The Board, under Dean George Blumer, had examined Johns Hopkins' four-year undergraduate requirement in 1915 and devised a five-year medical school plan, which contained, "the best of the American system of developing the average man with the ideal of the German system of concentrating on the individual man" [29]. Flexner advised them not to accept a five-year plan without a full-time faculty [30]. The Board of Permanent Officers found that the Johns Hopkins plan for full-time faculty was the most satisfactory, where consultation was not forbidden, but where consultation fees had to be turned into the clinical fund. As a result, by 1921, medicine, surgery, obstetrics, and pediatrics were granted professorships on a full-time basis, at an additional cost of \$50,000 a year [31]. In 1920, Flexner helped Yale School of Medicine secure a \$500,000 endowment from the General Education Board, with the condition that Yale raise the matching funds. "With proper planning, Yale was to be transformed into a great medical institution" [32].

It was fortunate for women that Johns Hopkins had been coeducational from its founding in 1893. It had advanced women's struggle to break into the medical profession by continuing to accept female students. Its very existence, after all, was the result of the large donation from Mary Elizabeth Garrett, who stipulated that women be admitted with men [33]. Since Johns Hopkins stood for the ideal of medical education in the country and had, in fact, benefited financially from its acceptance of women, it is unlikely that the governing boards of other medical schools would associate the acceptance of women with a lowering of standards.

What was the reason that the Yale School of Medicine admitted women in 1916?

Partly it was due to a growing limited acceptance of women in careers outside the home. From 1890 to 1920, the number of professional women increased 226 percent [34]. About two million women worked in the women's suffrage movement, with groups like the National Women's Suffrage Association, in the belief that suffrage was their right [35]. In 1916 they won a major victory by receiving support from President Wilson. By 1920 the nineteenth amendment had been passed and ratified, which showed that women could change the law. "By the second decade of the twentieth century, women had formed a veritable army of well-organized divisions, strategically linked, and positioned on the outer flank of the home" [36]. Pressure from within Yale came from an influential alumnus, Henry Farnam, who had personal stakes in the coeducation of the Yale School of Medicine.

There was a trend in education to provide higher education for women. Vassar, Smith, Bryn Mawr, Radcliffe, and Mount Holyoke had been established within the last fifty years. Although the main purpose of the women's colleges was to make women better wives and mothers, they provided women with the prerequisites for medical school and helped make the image of the "new woman" more pervasive [37]. It was now acceptable for a woman to hold a job as a secretary or a nurse, a job consistent with her gentle nature. Unfortunately, "The very qualities which fitted woman for nursing barred her from doctoring, and vice versa" [38].

In 1916 the United States had not yet entered World War I, but her participation seemed inevitable. By the spring of 1917, young doctors were being organized into medical corps [39]. Although women were not allowed to serve as army doctors, they did work with the Red Cross and in the U.S. Army Corps of Nurses [40]. Enrollment at Yale University dropped by one-third [41]. With the prospect of lower income from tuition, female students were perceived as more desirable. Women, especially those from well-to-do families, may have been admitted to all-male schools partly because of their ability to contribute to the schools financially.

THE DECISION TO ADMIT WOMEN

The only other record pertaining to the decision to admit women to the Yale School of Medicine, besides the Yale Corporation and the Board of Permanent Officers' minutes cited in the Introduction, is a letter from Henry Farnam to President Hadley. It reads:

Word has reached me informally that the faculty of the Medical School are willing to admit a limited number of women provided they are graduates of a college and provided funds can be raised to put in a suitable lavatory. As the latter condition seems to have been considered a serious one, I write to say that in case the facts are as I understand them I shall be glad to be responsible for meeting the expenses of suitable lavatory arrangements.

Believe me

Yours very sincerely,

Henry W. Farnam [42]

President Hadley replied:

Let me express thanks at the kind offer contained in your letter of March 31st. I am sure that it will help to facilitate greatly in connection with the possibility of admission of women to medical studies [43].

It is obvious that much of the dicussion regarding the admission of women must have taken place informally, perhaps over lunch at Mory's.

Dr. Louise Hutchins, an early Yale School of Medicine graduate, who presently provides family planning services to the women of rural Kentucky recalls the incident

Well, his name was Farnam, I think it was Henry Farnam, but Louise Farnam was the daughter. And he was big in the Yale administration. I forgot exactly his place, but when they said his daughter could not be admitted to Yale Medical School he said, "Why?" And they said, "Because we have no women's rest rooms!" And so we girls at Yale called it the Louise Farnam Memorial [44].

The precipitating event behind the admission of women to the medical school in 1916 was thus Farnam's offer to meet the necessary expenses. His interest in seeing women at the Yale School of Medicine was a personal one. His eldest child, Louise, wanted to be a physician. She had received a degree from Vassar in 1912 and a Ph.D. from Yale in physiological chemistry in 1916, and medical school would be the next step. Yale School of Medicine would be a logical place for her to continue her studies, following the Farnam family tradition at Yale that had begun in 1724 [45]. In addition to being a Yale graduate and a Yale professor, Henry Farnam served on the Prudential Board of the New Haven Hospital [46]. So, by making it possible for his first-born to attend medical school, he opened the doors enough to admit a small number of women each year.

In 1916 the extra thousand dollars needed for women's bathrooms was a large sum of money for a struggling institution like Yale. In 1914 the campaign for a twomillion-dollar endowment was not going well, and Dean George Blumer was discouraged [47]. Facilities for instruction in pathology, bacteriology, and general laboratory work were desperately needed. In 1914 the medical school had received pledges of money from two main sources: \$500,000 from the General Education Board, contingent on the change to full-time of three departments [48], and \$500,000 from the Brady family for the erection of a much-needed research laboratory. But each of these grants was based on the provision that Yale raise matching funds, and this was proving to be difficult. Not until 1918, when they received \$250,000 from the Carnegie Corporation and \$82,900 more from the General Education Board, did they reach (and go over) the two-million-dollar goal [49]. From 1917 to 1922 their total endowment rose from one million to three million dollars [50]. "Although steps had been taken to reorganize and perfect the School of Medicine, for one reason or another, its status continued to be precarious up until 1920" [51]. Additional plumbing expenses were a hardship, but it was a trivial excuse for excluding women from the medical school.

The Bulletin of the Yale University School of Medicine for 1916-17 reads,

a limited number of graduates of recognized colleges for women who can meet the special requirements in the sciences and language will be admitted to the school of medicine [52].

To be considered, men and women had to have studied:

Physics + laboratory
Inorganic chemistry + laboratory
Organic chemistry + laboratory
Biology + laboratory
German and French (two years of each) [53].

This is basically the same undergraduate premedical program as today, minus the foreign language requirements, plus English and calculus. To be admitted, however, men did not have to be college graduates provided they could supply proof of a similar education.

This policy was changed only in 1924, four years after George Blumer had handed over the deanship to Milton Winternitz and the Yale School of Medicine had undergone reorganization and renovation, including the building of the Brady Laboratories [54] and the hiring of full-time faculty [55]. The Bulletin was changed to read, "A limited number of women will be admitted on the same terms as men" [56]. It is clear that Yale was not "throwing its doors open to women," as the Journal of the American Medical Association reported [57]. Yale's doors were only opening a crack. The percentage of women enrolled in the School of Medicine was almost a constant 5 percent [58]. Although there is no other evidence beyond this constant proportion, it appears that women might have been admitted on a quota basis. At least at that time men and women were evaluated against the same criteria.

The percentage of women students in the Yale School of Medicine in the first four years of coeducation was about 5 percent [59]. The actual numbers can be seen in Table 2. In comparison to the previous year, there was a total of 109 students enrolled in 1921-22, while the increase in the total number of women admitted was three [60]. In 1926, the total number of students was 211, ten of whom were women [61]. In 1977-78, 27 percent of the entering class were women, about three times the percentage of 1968 [62].

THE FIRST WOMEN GRADUATES

There were three women and thirty-two men in the class of 1920 when they began medical school together. Louise Whitman Farnam, who was to be the scholastic star of her class, Helen May Scoville (Wellesley, '15) and Lillian Lydia Nye (University of Minnesota, B.A. '09, M.A. '10) were her female classmates. Out of the three women who began, only two graduated: both women and five men graduated cum laude. Nye dropped out of Yale between her second and third years for unknown reasons. We only know that from Yale she went to Johns Hopkins to finish her medical training [63]. Farnam, the first woman graduate, was also the first woman to win the Campbell Gold Prize, given at graduation to the student with the highest rank in examinations [64]. Yale demonstrated a continuing interest in its women students by hiring Scoville as an assistant instructor in pathology and bacteriology [65].

Of the first women admitted to the Yale University School of Medicine, Louise Farnam had an exceptionally interesting medical career. She was probably thinking about going to the Yale-sponsored medical school in China while she was still in

TABLE 2
Women at the Yale School of Medicine from 1916 to 1920

	1916-17 a		1917-18b		1918-19°		1919-20d	
	Men	Women	Men	Women	Men	Women	Men	Women
Number of students registered	74	3	67	4	66	3	83	5
Number of graduates	10	_	8	_	12	_	19	2

^aJAMA 69: 540, 1917

bJAMA 71: 536, 1918

^cJAMA 73: 500, 1919

dJAMA 75: 380, 1920

medical school. She chose to further her training at Johns Hopkins. While she was there she wrote to Dr. Edward Hume, who was organizing the medical school in China, asking if she could choose obstetrics instead of medicine and surgery, which she found "boring" [66]. Even in obstetrics she was not getting the intense training she wanted. She switched from obstetrics to pediatrics on suggestion from Hume, who wrote, "Dealing with little children in China means handling mothers and if other things are equal a woman ought to do this better than a man" [67]. By September 21, 1921, Dr. Farnam was on her way to join the faculty of medicine at Yali in Changsha, China [68]. This was Farnam's third "first"—she was the first female faculty member there.

In the late 1920s China was divided by a revolution. Dr. Farnam spent more time dealing with war injuries than practicing pediatrics. In July and August of 1930, Mao's army stormed Changsha, razing all the government offices. As they approached, all the hospital personnel fled. Farnam was the last to leave and the first to return to inspect the damage. "Two things," she wrote, "kept me. One is, that if the Chinese gunboat is there it means Chang Kai Shek must be thinking about us and there may be some relief, and the other is I hate to go off and leave a man with a bullet in his chest liable to have pneumonia with no doctor on board. So I stayed" [69].

In Yokohama, Japan, in 1930 Louise Farnam married Hugh Brian Wilson. He was an Englishman who worked for the Asiatic Petroleum Company in Changsha. She returned to England with her husband three years later. In the meantime she relinquished her staff position at Yali, but continued part-time [70]. One of her colleagues wrote,

Her help in teaching, treating cases, planning alterations and improvements in buildings, advising members of the staff, helping in every phase of our life here is manifest wherever one turns. We view her departure with deep sorrow in that she is unlikely to return, but great joy and thankfulness in that she has been with us these years, and with a desire to carry on in the spirit in which she has led us [71].

She was forty years old when she married, and when she moved to England she adopted two children. She did not give up her profession entirely and during World War II she replaced home medical service doctors who were called into war service [72].

The only woman in the graduating class of 1921, the second class admitting women, was Ella Clay Wakeman. She graduated cum laude and spent a year as an interne in medicine and surgery at Morristown Memorial Hospital in Morristown, New Jersey, and another year as resident in psychiatry in the Boston Psychiatric Hospital. After her marriage in 1923, she lived for some years in New Haven, occupied with family life and volunteer work, and moved to Bethany, Connecticut, in 1942. There she was Director of Public Health for twenty-three years [73].

In 1975-76, Ella Calhoun wrote down her medical school memoirs. This is how she remembers her years at the Yale School of Medicine.

Women had just been admitted to the Yale Medical School two years before I entered. (Dr. Louise Farnam, who became a medical missionary, was the first graduate of the school.) I was the only woman in the class of 1921. There was no fuss whatever made about this. I was a down-to-earth, attend-to-my-own business type; studious, scared, but pleasant and responsive. I was neat and

healthy looking, wore a suit and blouse, and in good weather either walked or rode my bike to school. There was always the trolley for a stand-by. The props that I remember were chiefly a cherished microscope which remained in the laboratory, dissecting instruments and drawing materials, and a number of very heavy books. A long white lab coat holding keys, flashlight, fountain pen and stethoscope was my familiar uniform. The study of anatomy dominated our freshman year. Gray's Anatomy, the heaviest book ever published, except for Webster's Dictionary, was my constant vade mecum. We learned to know and describe every knob, nook, and cranny of every bone of the human skeleton from skull to metatarsal. The dissecting room, top floor of 100 York, with its cadavers and smell of formaldehyde was a challenge paced with fortitude and experienced with increasing fascination. My partner . . . was one of the less attractive and able students. He was courteous and distant with me; it was probably a trial to him to have a partner in whose presence he had to behave. I was excited by each discovery that my scalpel uncovered under the supervision of the grand old man of Anatomy, "Pop" Ferris. The first thing he taught me was to hold my scalpel, not like a dinner knife cutting steak, but like a pen under delicate control [74].

THE INCREASING ROLE OF WOMEN AT YALE UNIVERSITY

Women have been striving to become members of the faculty at Yale University since 1920. The first three women ever appointed to faculty positions at Yale University were two women at the medical school and one at the law school [75]. New Haven Hospital hired its first female residents in 1919 [76]. Two were hired as instructors in 1921, to make a total of four women (the other two graduated from Johns Hopkins), out of twenty-one instructors [77]. As Yale School of Medicine grew, so did the number of available positions and the number of women who filled them. While more women became part of the faculty in subsequent decades, the first woman appointed for senior professorship at Yale School of Medicine was Dr. Dorothy Horstmann, who was promoted to full professor of epidemiology and medicine in 1960 [78]. In 1977-78, 5 percent of the tenured positions were held by women, and 4 percent of the professorships [79].

In response to the rising number of women medical students, faculty, and post-doctorates at the Yale School of Medicine, the Office for Women in Medicine was established at Yale in 1975. The creation of the Office was a direct response to a recommendation made to Dean Robert W. Berliner by a faculty committee chaired by the late Dr. Phylis Bodel. The purpose of the Office is to provide support for and to encourage communication among women in medicine, as well as to make recommendations to the Dean about inequities in hiring and promotion.

Although women were admitted to the graduate and professional schools earlier in the century, Yale excluded women from its undergraduate program until 1969. An early president of Yale, Ezra Stiles, who in 1783 tested Lucinda Foote, a twelve-year-old Latin and Greek scholar, for admission wrote.

I found her translating and expounding with (perfect) ease, both words and sentences in the whole of Virgil's Aeneid, in selected orations of Cicero, and in the Greek testament. I testify that were it not for her sex, she would be considered fit to be admitted as a student in the Junior [= Freshman] class of Yale University [80].

If only her father had offered to pay for the lavatories!

CONCLUSION

The admission of women to the Yale University School of Medicine falls chronologically between Johns Hopkins and Harvard, two medical schools which historically represent divergent attitudes toward the medical education of women. Yale was neither the first nor the last to admit women. The change in policy at Yale was the result of a combination of factors but primarily due to the influence and financial support of Henry Farnam. Since 1916 women have been educated at the Yale School of Medicine, and more recently in ever-increasing numbers, consistent with the increase in the proportion of women entering the health professions.

ABBREVIATIONS

YUL: Yale University Library, Sterling Memorial Library, New Haven, CT

YML: Yale Medical Library, 333 Cedar Street, New Haven, CT

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